

Claims

1. Manufacturing process of a clinch nut comprising at least the following successive steps :
 - 5 - a rough metal casting is cut and deformed by cold heading so as to form a rough part comprising at least a recess zone,
 - a bore adjacent to the recess zone is formed by cold heading,
 - an internal thread is made in the bore,
 - 10 process wherein the rough part undergoes a thermal annealing treatment between formation of the recess zone and formation of the bore.
2. Process according to claim 1, wherein the rough part is achieved by stamping then by extrusion.
- 15 3. Process according to claim 1, wherein the bore is achieved by extrusion.
4. Process according to claim 3, wherein the bottom of the bore is drilled.
5. Process according to claim 1, wherein the internal thread is achieved by tapping by material upsetting.
 - 20 6. Process according to claim 1, wherein the head of the clinch nut is formed during formation of the rough part.
 - 25 7. Process according to claim 1, wherein the head of the clinch nut is formed during formation of the bore.
 8. Process according to claim 1, wherein a surface treatment is performed after formation of the internal thread.
 - 30 9. Process according to claim 8, wherein the surface treatment is an anti-corrosion treatment.
 - 35 10. Clinch nut achieved by a manufacturing process according to claim 1, wherein the clinch nut comprises a recess zone and a tapped zone, the ratio of the Vickers hardness of the recess zone over the Vickers hardness of the tapped zone being substantially comprised between 0.40 and 0.75.

11. Clinch nut according to claim 10, wherein the clinch nut is made of a material chosen from steel, stainless steel, aluminium or brass.